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Empowering quality of life for elderly people during crisis and epidemics in Saudi Arabia

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ABSTRACT

Crisis and epidemics have been known to affect quality of life for people across all ages. Several literatures have reported increasing prevalence and higher fatalities among older people. The study aims to evaluate the relationship between elderly people and their caregivers; impact of the crisis and epidemics on the elderly psychologically and behaviourally; the impact of the crisis of epidemics on the health and economic health of the elderly; mechanisms for activating awareness of the role of governmental, civil, voluntary and charitable organizations in them; and the first, second, and third axes have a correlation.. The study also aims to provide suggestions and recommendation to enhance quality of life and care of elderly people. Most of the respondents were female which were represented by 62.8% of the respondents, while 37.2% of the respondents were male elders. 71.6% of the respondents were Saudi Arabians while the remaining 28.4% respondents were Non-Saudi Arabians. A strong positive correlation ($r = 0.650$, $p = 0.000$) exists between the impact of the epidemic and crisis on the health and economic health of the elderly (second axis) and mechanisms for activating awareness of the role of governmental, civil, voluntary and charitable organizations in them (third axis), which is statistically significant at $p<0.05$. The study recommends that the elderly, who is infected by the epidemic and crisis, s which is significant statistically hould be well taken care of; sick elders should be provided with moral, emotional and material support; entertainment should be provided for the infected elders. Other suggestions included financial aids/supports for the elderly; support of children/family members; health awareness among the elderly; and societal/community awareness; and also not forgetting to reintegrate rejuvenated elderly into the society.

Keywords: Crisis, epidemics, infectious disease, illnesses, elderly people, Saudi Arabia, impact, caregiver

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1. Introduction

Irresistible sicknesses were the leading reasons for disability and mortality until the mid-twentieth century. Major epidemics of smallpox, cholera, diphtheria, typhoid typhus, fever, tuberculosis, and plague cause millions of deaths globally, and diseases like rheumatic fever, scarlet fever, mumps, syphilis, pertussis, poliomyelitis, and measles caused death as well as brutal deformities, disabilities, social rejection and functional incapacity [1]. "The disclosure of the microbe hypothesis of illness brought clinical advances, for example, sterilization, general wellbeing measures, antisepsis, anti-microbials and inoculation, which contributed significantly to the decrease of passings and dismalness of irresistible sicknesses in industrialized nations in the final part of the twentieth century. Amusingly, today pestilences and irresistible infections are as yet liable for 33% of all passings on the planet; the World Wellbeing Association gauges "nearly 50,000 men, women and children are dying every day from infectious diseases" [2]. Generally, elderly people are more

susceptible to epidemics and infections compared to younger adults. It is a common knowledge that immune dysfunction, particularly in cell-mediated immunity is associated with aging [3]. Elderly people however suffer from many chronic infections, among which some affect the reliability of the resistance of the host to infections. It is not very clear whether the changes in immune system related with maturing are enough in themselves to elucidate the higher predisposal of diseases in elderly people or whether infections linked to age (and its unpleasant impact on host defense) is more significant in this interaction [4]. Many researches have revealed that some epidemics and infectious diseases are more prevalent among elderly people; the impacts of infectious diseases are also more pronounced among elderly people than in younger adults [5]. Lower respiratory tract infections, Urinary tract infections, skin and soft tissue infections, infective endocarditis, intra-abdominal infections (abscesses, cholecystitits, appendicitis, diverticulitis), bacterial meningitis, herpes zoster show up, and tuberculosis to have a special tendency for elderly people. In addition, the death rates of majority of these disease conditions are at least three times higher among old patients than among more youthful grown-up patients having the same condition[6]. Perhaps many factors are responsible for this higher mortality and morbidity: decreased host resistance, age-related physiologic reserve capacity reductions, chronic underlying illnesses, and a low tolerance for invasive diagnostic and treatment procedures, delays in diagnosis and treatment, more serious danger and frequency of nosocomial diseases, higher paces of unfriendly responses to drugs [7], counting anti-toxins and postponed or helpless reaction to antimicrobial treatment, and absence of consideration regarding the elderly and their needs.

1.1. Aims of the study

The study aims to evaluate the relationship between elderly people and their caregivers; impact of the epidemics and crisis on the elderly psychologically and behaviourally (first axis); the impact of crisis on quality of life (health and economic health) of the elderly (second axis); mechanisms for activating awareness of the role of governmental, civil, voluntary and charitable organizations in them (third axis); and the The first, second, and third axes have a correlation [8]. The study also aims to provide suggestions and recommendation to enhance the care of elderly people.

2. Literature review

2.1. COVID-19 pandemic in the Kingdom of Saudi Arabia

The experience of Saudi Arabia in previous outbreaks of corona virus shaped the manner it handled the current pandemic. in 2012, the World Health Organization (WHO) announced the spate of the Middle East Respiratory Condition Covid (MERS-COV), which affected many countries worldwide[9]. A large percentage of the East Respiratory Syndrome-Corona Virus infections were reported in the Arabian peninsula, particularly Saudi Arabia[10]. "Following the confirmation of its first case of COVID-19, on Monday 2 March 2020, the Saudi government has been vigilantly monitoring the situation and developing country specific measures that are in line with the WHO guidelines in dealing with the outbreak" [11]. Such measures include closing all shops and malls in the country, except grocery stores and pharmacies, closing down all schools and universities and suspending all outbound and inbound flights. Umrah visas were suspended as well as prayers in mosques, including the two Blessed Mosques in Almadina and Mekkah. The government declared a general curfew to limit people's movements for most hours of the day on 24 March 2020.

2.2. Infectious disease in older people

Infectious diseases have been known to affect people across all ages. However, several literatures have reported increasing prevalence and higher fatalities among older people. For instance, pulmonary tuberculosis has been reported to be increasing among older patients [12]. LiverTox (2018) reported that "an increased incidence of probable isoniazid induced hepatitis occurred in patients older than age 64 who had reactions to tuberculin tests and received isoniazid chemoprophylaxis. This increase was not as great in persons ages 35 to 49 years or in those ages 50 to 64 years". Bentley (1981) noted that the occurrence of institutionally contracted pneumonia is about one hundred to one hundred and 15 per one thousand patients while those of community-acquired pneumonia stands at about twenty-five to forty-four patients in older people.

The COVID-19 disease caused by SARS-Cov-2 has swiftly spread throughout the globe since it was first announced in December 2019. Although its community prevalence is unsure due to the asymptomatic cases, the disease seems to affect people of all ages [13]. Elderly people however are at greater danger of suffering negative impact, which can result to a higher mortality rate, reaching up to five times more than the total

average for those older than eighty years old (WHO, 2020). More than ninety-five percent of COVID-19 fatalities in Europe and about in China have included people older than 60 years old[14]. Eighty percent of deaths in the US were among adults sixty-five years and above [15]. Thus, health strategies to prevent spread of corona virus (such as social distancing and quarantine) are important[16].

2.3. The impact of epidemic on the elderly people

Available literatures have documented a rise in depression as well as anxiety among the impact of the COVID-19 pandemic on the entire population[3]. Yang *et al* (2020) reported that these effects are higher among elderly people largely as a result of higher threat of infection, strict lockdown as well as loss of social support. Earlier research have as well documented that elderly people have comparatively high incidence of depression even in the absence of crisis [17], "which is disturbing in the face of fact that people suffering from pre-existing mental health illnesses have been most affected by the negative psychological impacts of lockdowns" [18]. While heightened mental health conditions among the general society may already worrisome, these concerns surpass psychological health among elderly people. Researches have revealed that depression among elderly people is linked with the succeeding cognitive down turn, and risk of Alzheimer's Disease [17]. "This condition will possibly be even further exacerbated by the physical restrictions put on the movement of people outside their homes, resulting to less exercise opportunities for several people. Many investigations have established that exercise, even in light to moderate amount and intensities, can have a considerable positive impact on cognitive function among elderly people, particularly in those with neuropsychiatric disorders or cognitive impairments" [19]. According to [20], "Considering at this previous research, increased mental strain and general mental health conditions, decreased exercise, and loss of socialization, could have considerable negative impacts on elderly people. Even though the lockdowns may be momentary, these impacts are probable to be long term, and may pose notable risks to the quality of life of elderly people in the future. Many countries have however seen changes come into place since the inception of the COVID-19 pandemic which extend far beyond increased depression and loss of socialization. Lockdowns have resulted in a significant shift in the functioning of day-to-day life: the world has gone digital. As hospitals have filled with COVID-19 patients, access to regular healthcare for non-COVID related disorders has been interrupted". During this period, people who do not seek medical care for non-COVID related illnesses may be at greater risk of sickness and death[21]. This threat will possibly inexplicably affect elderly people, who are at higher risk of disease conditions than younger people and are more probable to be advices to stay away from places where they could catch the illness. As a rejoinder to this challenge, there has been a notable change in healthcare into the digital world. Tele-health, or the process of rendering healthcare remotely, and digitally, has become humdrum in many regions of the world[22]. This shift however has had a number of negative effects on elderly people than younger people. A recent research indicated that around forty percent of elderly people were not ready to make use of telehealth facilities, mostly as a result of lack of competence to use of the technology effectively [23]. This has been further shown at some point in the COVID-19 pandemic, as the age range with the maximum use of telehealth has been individuals aged twenty to forty-four, regardless of the reality that elderly people generally have the most annual number of hospital and doctor visits [23]. "Although there have been some recent efforts to create virtual geriatric clinics to support the elderly during the pandemic, research has shown these have had varying success, and have been met with a variety of problems related to difficulties with technology use" [24]. Thus, even though they are the group that needs telehealth remedies the most[25], elderly people has gained from their use the least. This change into the digital world transcends merely the healthcare area. Accessing education, news, group socialization, grocery delivery services, and several other services online have become humdrum. "The world has shifted to endeavor to make up for the loss of access to day by day resources, and in several areas, and for several people, this has been quite effective" [26]. One group however probably to gain the least from these online alternatives is elderly people, who have noticeably lower degree of acceptance and usage of internet than younger groups [27]. This gives rise to a troubling paradox: the group most negatively impacted by the COVID-19 pandemic, are as well probably the least capable of maximizing the facilities provided to lessen its impact.

3. Method

With the purpose of gathering data for this study, structured questionnaires were randomly administered to the elderly in Saudi Arabia. The researcher was able to secure an Institutional Review Board (IRB) approval.

Informed consent was obtained from the respondents with an assurance of the confidentiality of their data. A pilot study was first of all conducted. The Cronbach Alpha value was greater than 0.7 showing an acceptable internal consistency. The respondents (elderly) were within the age range of forty-four (44) and ninety-five (95) years. 151 appropriately filled questionnaires were recovered.
Questions about socio-demographic factors were included in the survey design., views on the impact of the epidemic and crisis on the elderly psychologically and behaviourally (first axis); the impact of the epidemic and crisis on the health and economic health of the elderly (second axis); and mechanisms for activating awareness of the role of governmental, civil, voluntary and charitable organizations in them (third axis).
The data collected was analyzed using Factual Bundle for Sociology (IBM SPSS Measurements 20). Engaging measurements were utilized to report the rates for clear factors while mean qualities with standard deviations were utilized to report constant factors. Missing information were overlooked on a premise examination by-investigation and substantial rates were accounted for. The information was likewise exposed to connection examination to decide the connection between first, second and third axis.

4. Result and discussion

Respondents' Socio-demographic Characteristics is shown in Table 1.

Table 1. Gender of Elder

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	54	35.8	37.2	37.2
	Female	91	60.3	62.8	100.0
	Total	145	96.0	100.0	
Missing	System	6	4.0		
Total		151	100.0		

From the Table 1, most of the respondents were female which were represented by 62.8% of the respondents; while 37.2% of the respondents were male elders.

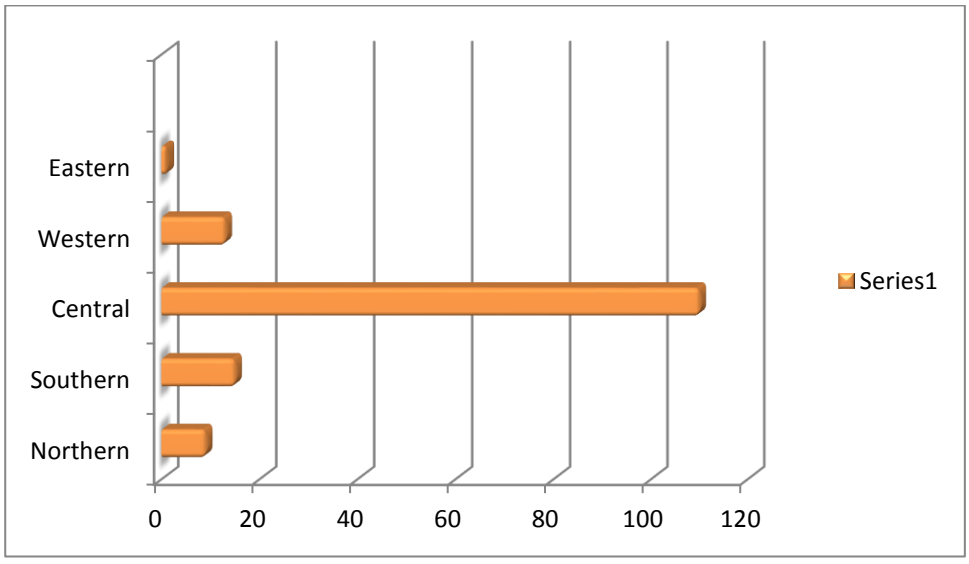

Figure 1. Residence of Elders

Presented in figure 1 are the residences of the respondents. Of the 145 who reported their place of residence, most (74.3%) of them were from the Central region of the kingdom of Saudi Arabia, this followed by those from the Southern region (10.1%) and those from the West (8.8%). Respondents from the Northern and Eastern region of the kingdom were 6.1% and 0.7% respectively.

Table 2. Nationality of the elder

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Saudi Arabian	106	70.2	71.6	71.6
	Non-Saudi Arabian	42	27.8	28.4	100.0
	Total	148	98.0	100.0	
Missing	System	3	2.0		
Total		151	100.0		

Table 2 shows the nationality of the elders who responded in this study. Most (71.6%) of the respondents were Saudi Arabians while the remaining 28.4% respondents were Non-Saudi Arabians.

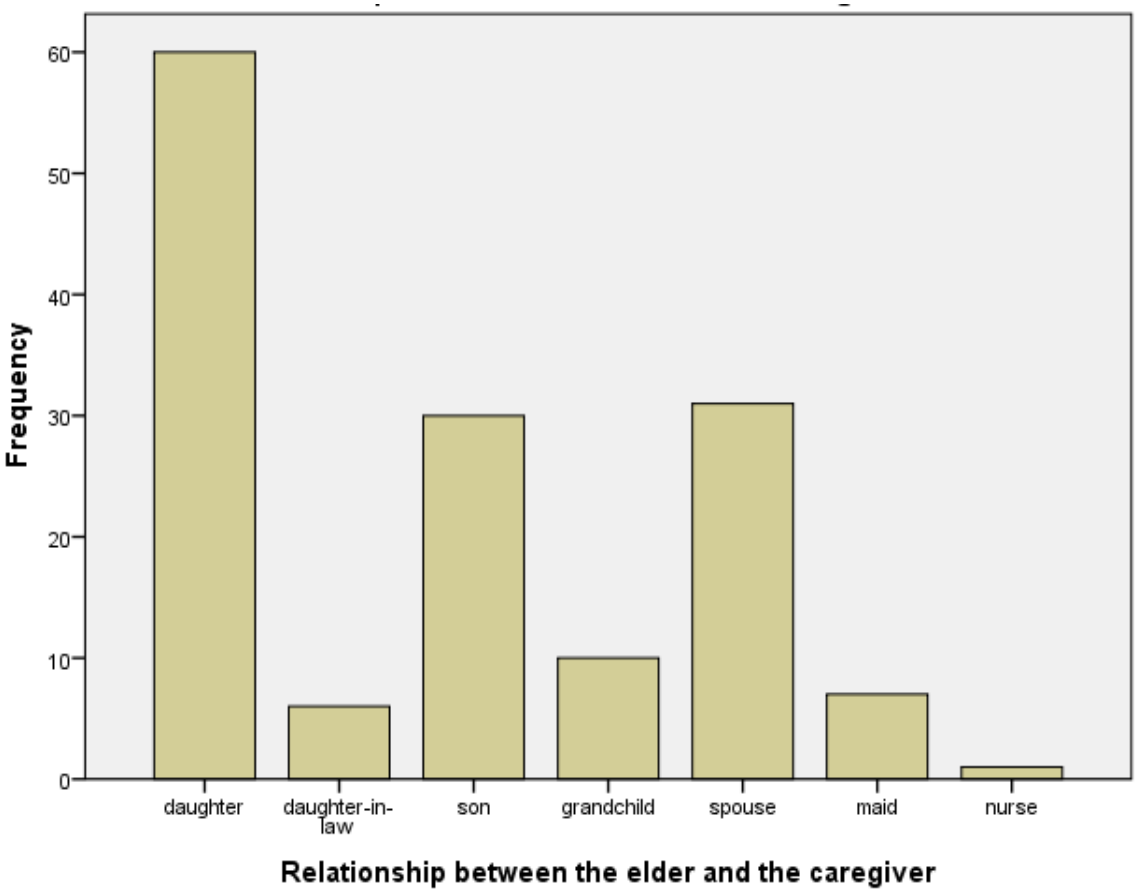

Figure 2. Relationship between the elders and their care givers

Figure 2 illustrates the relationship between the elders and their caregivers. 145 (96.0%) of the total, 151 respondents responded to the questions on the existing relationship they have with their caregiver. Most of them, amounting to 41.4% of the elders revealed that their daughters were their caregivers. This was followed by 21.4% of them who reported their spouse as their caregiver. 20.7% of the respondents revealed their sons took care of them. 6.9%, 4.8% and 4.1% of the respondents reported their grandchildren, maid, and daughter respectively as their caregivers. Only 1 (0.7%) of the respondents claimed her caregiver was a nurse.

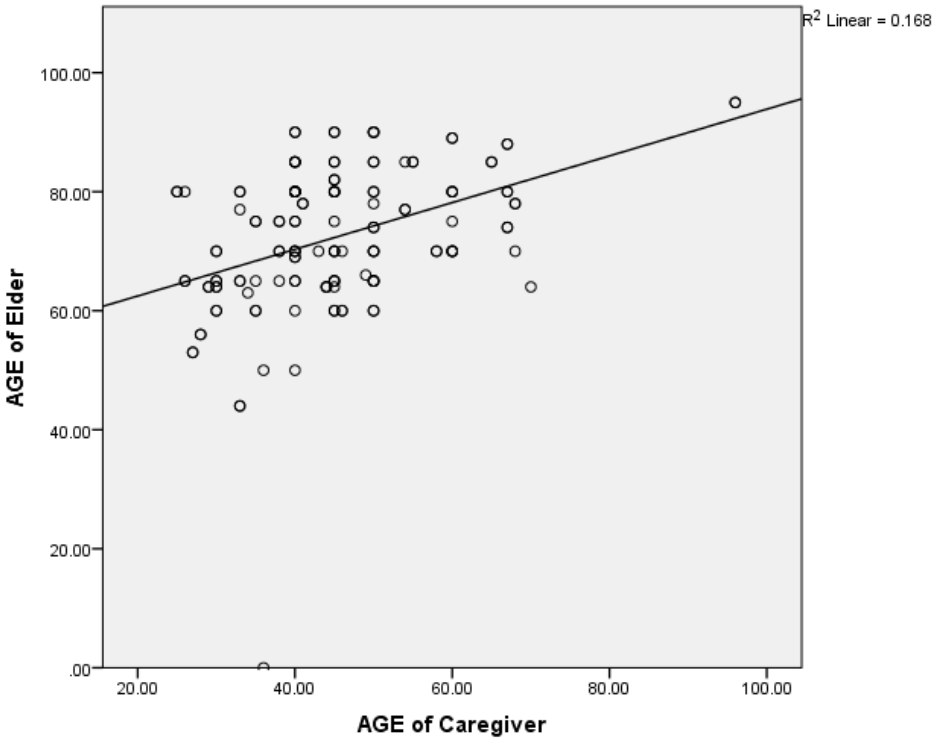

Figure 3. Relationship between the age of the elders and the age of their caregivers.

Though there is a moderately positive correlation (r = 0.410, p = 0.000) which statistically significant (p < 0.05). Thus, with increase in age of the elders, was also increase in the age of their caregivers. This is justifiable since a great majority (94.5%) of the caregivers where family members related by blood or marriage (daughter, son, daughter-in-law, spouse or grandchild). Hence, the older the age of an elder, the older his/her family members would be. However, the mean age of the caregiver (45.262±12.598 years) was lower than the mean age of the elder (71.841±13.452 years).

Table 3. First, Second, and Third Axis Correlation

Correlations

		First_Axis	Second_Axis	Third_Axis
First_Axis	Pearson Correlation	1	-.016	.672**
	Sig. (2-tailed)		.848	.000
	N	149	148	148
Second_Axis	Pearson Correlation	-.016	1	.650**
	Sig. (2-tailed)	.848		.000
	N	148	148	148
Third_Axis	Pearson Correlation	.672**	.650**	1
	Sig. (2-tailed)	.000	.000	
	N	148	148	148

**. At the 0.01 level, correlation is significant (2-tailed).

First axis: impact of the epidemic and crisis on the elderly psychologically and behaviourally; second axis: the impact of the epidemic and crisis on the health and economic health of the elderly; third axis: mechanisms for activating awareness of the role of governmental, civil, voluntary and charitable organizations in them

There is a very weak negative correlation (r = -0.016) between the impact of the epidemic and crisis on the elderly psychologically and behaviourally (first axis) and the impact of the epidemic and crisis on the health and economic health of the elderly (second axis) which is not statistically significant as p > 0.05.

There is a statistically significant strong positive correlation (r = 0.672, p = 0.000) between the impact of the epidemic and crisis on the elderly psychologically and behaviourally (first axis) and mechanisms for

activating awareness of the role of governmental, civil, voluntary and charitable organizations in them (third axis).

There is a strong positive correlation ($r = 0.650$, $p = 0.000$) between the impact of the epidemic and crisis on the health and economic health of the elderly (second axis) and mechanisms for activating awareness of the role of governmental, civil, voluntary and charitable organizations in them (third axis); which is statistically significant at $p<0.05$. This association between the variables (first axis, second axis and third axis) is illustrated as a scatter plot matrix in figure 1 in the APPENDIX.

Table 4. Suggestions and Recommendation

		Frequency	Percent	Valid Percent
Valid	Nothing	18	11.9	12.9
	Providing moral, emotional and material support	20	13.2	14.3
	Take care of them	36	23.8	25.7
	Societal/Community Awareness	6	4.0	4.3
	Increase their Health Awareness	5	3.3	3.6
	Entertain them	12	7.9	8.6
	Activating government interest, especially the Ministry of Social Affairs.	5	3.3	3.6
	Role of Ministry of Health	5	3.3	3.6
	Financial Aids/Support	11	7.3	7.9
	Establish a team specialized in periodic monitoring of the elderly	8	5.3	5.7
	Support of Children/Family Members	10	6.6	7.1
	Reintegrate them into society	4	2.6	2.9
	Total	140	92.7	100.0
Missing	System	11	7.3	
Total		151	100.0	

Several relevant suggestions and recommendations have been compiled from the responses of the elders. Most (25.7 %) of the respondents reported that an elderly who is infected by coronavirus, should be well taken care of. This was followed by 14.3% of the respondents who were of the opinion that sick elders should be provided with moral, emotional and material support. 8.6% of the respondents were of the opinion that elders infected with the coronavirus or any other infection should be entertained. This would lighten the mood of the elderly and take their minds off the thoughts of being infected. This was followed by those who proposed financial aids/supports (7.9%) for the elderly; those who advocate support of children/family members (7.1%) in looking after the elder who is sick; 5.7% of the respondents suggested the establishment of team specialized in periodic monitoring of the elderly. 4.3% of the respondents advocated for societal/community awareness. Other suggestions by the respondents include increase in health awareness of the elderly (3.6%), Activating government interest especially the Ministry of Social Affairs (3.6%), role of Ministry of Health (3.6%) and Reintegrating them into the society (2.9%).

5. Conclusion

Though the mean age of the caregiver was lower than the mean age of the elder, the age of caregivers increased with the age of the elders. The caregivers were mostly family relations either by blood or marriage.

There is a very weak negative correlation between the impact of the epidemic and crisis on the elderly psychologically and behaviourally (first axis) and the impact of the epidemic and crisis on the health and economic health of the elderly (second axis) which is not statistically significant. A statistically significant strong positive correlation existed between the impact of the epidemic and crisis on the elderly psychologically and behaviourally (first axis) and mechanisms for activating awareness of the role of governmental, civil, voluntary and charitable organizations in them (third axis).

There was also a strong correlation between the impact of the Corona crisis on the health and economic health of the elderly (second axis) and mechanisms for activating awareness of the role of governmental, civil, voluntary and charitable organizations in them (third axis).

Several relevant suggestions and recommendations were given. Some of them included: elderly who is infected by the epidemic and crisis, should be well taken care of; sick elders should be provided with moral, emotional and material support; entertainment should be provided for the infected elders. Other suggestions included financial aids/supports for the elderly; support of children/family members; health awareness among the elderly; and societal/community awareness; and also, not forgetting to reintegrate rejuvenated elderly into the society.

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partaken in the review and examiner plan, information examination, drafted the composition, and endorsed it before accommodation.
Consent to participate and ethics approval: Morals endorsement was gotten for this review from the Global Survey Board (IRB) in Princess Nourah bint Abdulrahman College. Riyadh, Saudi Arabia with IRB Log Number: 20-0520. The not set in stone that the proposed project represents something like insignificant danger to the members. Accordingly, the proposition has been considered excluded from IRB audit. Members were educated that all the data got from the exploration device "the poll" will be managed in the strictest certainty and might be utilized for logical examination purposes as it were. Namelessness and privacy were disclosed to members. Members were related to codes to guarantee namelessness. Questions that could cause any type of mental injury on members were kept away from.
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